CLAIMS

1. A hemming machine for joining an inner sheet metal panel with an outer sheet metal panel comprising:

a hemming tool containing an electromagnetic coil positioned to electromagnetically crimp, weld, or crimp and weld said outer sheet metal panel to said inner sheet metal panel.

2. The hemming machine of claim 1, further comprising a backing die positioned outside said inner metallic sheet and said outer metallic sheet opposite said electromagnetic coil.

3. The hemming machine of claim 1, where said inner sheet and said outer sheet are composed of identical metallic materials.

4. The hemming machine of claim 1, where said inner sheet and said outer sheet are composed of dissimilar metallic materials.

5. The hemming machine of claim 1, where said inner sheet and said outer sheet are composed of identical metallic materials chosen from the group consisting of: steel, magnesium, aluminum, alloys of magnesium, and alloys of aluminum.

6. The hemming machine of claim 1, where said inner sheet and said outer sheet are composed of dissimilar metallic materials chosen from the group consisting of: steel, magnesium, aluminum, alloys of magnesium, and alloys of aluminum.

7. A method of electromagnetically hemming and inner sheet of metallic material with an outer sheet of metallic material comprising the steps of:

mechanically hemming said inner sheet with said outer sheet;

positioning a coil adjacent said hemmed inner sheet and outer sheet;

crimping, welding, or crimping and welding contacting surfaces of said inner sheet and said outer sheet by pulsing current through said coil.

8. The method of claim 7, further comprising the step of:

positioning a backing die outside said inner metallic sheet and said outer metallic sheet opposite prior to said crimping, welding, or crimping and welding step.

9. The method of claim 7, where said inner sheet and said outer sheet are composed of identical metallic materials.

10. The method of claim 7, where said inner sheet and said outer sheet are composed of dissimilar metallic materials.

11. The method of claim 7, where said inner sheet and said outer sheet are composed of identical metallic materials chosen from the group consisting of: steel, magnesium, aluminum, alloys of magnesium, and alloys of aluminum.

12. The method of claim 7, where said inner sheet and said outer sheet are composed of dissimilar metallic materials chosen from the group consisting of: steel, magnesium, aluminum, alloys of magnesium, and alloys of aluminum.